

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended) A catalytic composition, comprising a product resulting from bringing the following three constituents into contact in any order:

- a) a least one divalent nickel compound of the formula



where R_1 is an alkyl, ~~eyeoalkyl~~ cycloalkyl, alkenyl, aryl, aralkyl or alkaryl radical containing up to 20 carbon atoms;

b) at least one hydrocarbylaluminum dihalide with formula ~~AlRX₂~~ AlRX₂, where R is a hydrocarbyl radical containing 1 to 12 carbon atoms and X is a chlorine or bromine atom; and

- c) at least one organic Bronsted acid;

the mixture obtained being pre-conditioned in a solvent, in an inert atmosphere at a temperature of 0 to 80°C, for 1 minute to 5 hours, prior to use as a catalyst.

Claim 2 (canceled)

Claim 3 (currently amended): A catalytic composition according to claim 1 wherein the pK_a of said organic Bronsted acid is a maximum of 3 at 20°C and is a ~~halogenocarboxylic~~ halogenocarboxylic acid of the formula R_2COOH where R_2 is a halogenated alkyl radical.

Claim 4 (currently amended): A catalytic composition according to claim 3 wherein said organic Bronsted acid is a halogenoacetic acid of formula ~~CX_pH_{3-p}~~ CX_pH_{3-p}-COOH

where X is fluorine, chlorine, bromine or iodine, and p is a whole number from 1 to 3.

Claim 5 (original): A catalytic composition according to claim 4, wherein said organic Bronsted acid is trifluoroacetic acid, trichloroacetic acid or tribromoacetic acid.

Claim 6 (previously amended): A catalytic composition according to claim 21, wherein the preconditioning comprises mixing the three constituents in a hydrocarbon or halogenohydrocarbon solvent with stirring and in an inert atmosphere at a controlled temperature of 0°C to 80°C and for a duration of 1 minute to 5 hours.

Claim 7 (original): A catalytic composition according to claim 1, wherein the mole ratio of said hydrocarbylaluminum dihalide to said nickel compound, expressed as the Al/Ni ratio, is 2/1 to 50/1, and the mole ratio of said Bronsted acid to said nickel compound is 0.25/1 to 10/1.

Claim 8 (currently amended): A catalytic composition according to claim 1 wherein said hydrocarbylaluminum dihalide contains an aluminum trihalide, the mixture of these two compounds having formula $\text{AlR}_n\text{X}_{3-n}$ ~~$\text{AlR}_n\text{X}_{3-n}$~~ , R and X being as defined in claim 1 and where n is a number between 0 and 1.

Claim 9 (currently amended): A catalytic composition according to claim 8, wherein the mole ratio between said hydrocarbylaluminium dihalide ~~enriched~~ mixed with an aluminium trihalide and the nickel compound, expressed as the ratio Al/Ni, is 2/1 to 50/1, and the mole ratio of the Bronsted acid to the nickel compound is 0.25/1 to 10/1.

Claim 10 (currently amended): A catalytic composition according to claim 8, wherein said hydrocarbylaluminium dihalide ~~enriched~~ mixed with an aluminium trihalide is obtained by mixing a hydrocarbylaluminium dihalide with formula AlRX_2 with an aluminium trihalide AlX_3 .

Claim 11 (currently amended): A catalytic composition according to claim 8, wherein said hydrocarbylaluminium dihalide ~~enriched~~ mixed with an aluminium trihalide is obtained by mixing dichloroethylaluminium with aluminium trichloride.

Claim 12 (previously amended): A process for dimerization or oligomerization of at least one monoolefin, comprising contacting said monoolefin with a catalytic composition according to claim 1.

Claim 13 (previously amended): A process according to claim 12, wherein the pre-conditioning solvent for the catalytic composition comprises a mixture of olefins having a composition approximating that of the mixtures obtained by said dimerization or oligomerization reaction.

Claim 14 (original): A process according to claim 12, in which the propylene is dimerized or oligomerized, wherein the pre-conditioning solvent for the catalytic composition principally comprises isohexenes.

Claim 15 (previously added): A process according to claim 12, wherein the pre-conditioning is conducted with stirring under an inert atmosphere at 0°C to 80°C for 1 minute to 5 hours, and the catalyst is then transferred to a reactor under an inert atmosphere.

Claim 16 (previously added): A process according to claim 12, wherein the preconditioning is conducted with stirring under an inert atmosphere at 10° to 60° for 5 minutes to 1 hour, and the catalyst is then transferred to a reactor under an inert atmosphere.

Claim 17 (previously added): A catalyst composition according to claim 3, wherein the halogenocarboxylic acid has a total of 2 to 20 carbon atoms and contains at least one halogen atom alpha to the -COOH group.

Claim 18 (previously added): A catalyst composition according to claim 1, being devoid of ethylene, propylene and butene.

Claim 19 (previously added): A catalytic composition according to claim 18, wherein pre-conditioning comprises mixing the three constituents in a hydrocarbon or halogeno-hydrocarbon solvent with stirring and in an inert atmosphere at a controlled temperature of 0°C to 80°C and for a duration of 1 minute to 5 hours.

Claim 20 (previously added): A catalyst composition according to claim 19, wherein the pre-conditioning solvent comprises isohexenes.

Claim 21 (previously added): A catalyst composition comprising (a) at least one divalent nickel compound of the formula $(R_1COO)_2Ni$, wherein R_1 is alkyl, cycloalkyl, alkenyl, aryl, aralkyl or alkaryl of up to 20 carbon atoms; (b) at least one hydrocarbylaluminum dihalide of the formula $AlRX_2$, wherein R is hydrocarbyl of 1 to 12 carbon atoms and X is chlorine or bromine; and (c) at least one Bronsted acid; said composition being preconditioned in a solvent.